

Society Reports.

AMERICAN NEUROLOGICAL ASSOCIATION.

*Twentieth Annual Meeting held at the Cosmos Club,
Washington, D. C., on May 30 and 31, June 1, 1894.*

President, B. SACHS, M.D., New York.

*Secretary and Treasurer, G. M. HAMMOND, M.D., New
York.*

Dr. SAMUEL AYRES presented

A CASE OF MYXŒDEMA TREATED BY SHEEP'S THYREOID (See page 481.)

DISCUSSION.

Dr. M. A. STARR, of New York City, presented photographs of patients having myxœdema; in three, improvement was seen. There were some practical points, he said, about using the thyroid extract. Parke, Davis & Co.'s extract was good, but it produced gastric disturbance. He had also used fresh preparations made for him by his assistant, but he now used exclusively the cheapest preparation, which was Burroughs, and Welcome's tabloid, imported by Fraser, and by Fairchild Brothers and Foster from England. It was put up in a very neat form, and was odorless and tasteless. It cost only one cent per tablet. Each thyroid tablet contained five grains of thyroid extract, and after a patient was practically cured, one tablet per day was all that was required. He had seen in two of these patients melancholia with suicidal intent. Each of them had had hallucinations and dementia.

In regard to the treatment of allied diseases by thyroid extract, the speaker said he had tried it in paralysis agitans without benefit. He had seen marked improvement follow its use in neuroses of the menopause—*i. e.*,

flushes, headaches and blotches. He had also used it in acromegaly. In two of these cases the patients had been made more comfortable and the symptoms were more thoroughly relieved than by any other that had been tried. He had tried it in epilepsy, progressive muscular atrophy, and chorea without effect.

Dr. GEORGE W. JACOBY, of New York City, presented photographs of a case of myxœdema now under treatment with thyroid extract. He thought that we could not see too many of these cases, as the diagnosis was not always as simple as has been assumed. So this case had been seen by a number of observers without a correct diagnosis being made; these photographs were taken from a fourteen-year-old girl, who in addition to the physical and psychical myxœdematous symptoms presented a quasi dystrophic condition of the lower extremities. Such association of myxœdema with primary muscular dystrophy has been noted in a few cases and for this reason the speaker thought it possible that thyroid extract might be of service in uncomplicated dystrophic disorders.

Dr. E. D. FISHER, of New York City, said he thought the administration of thyroid extract should be confined to cases of myxœdema, or to thyroid affections. Trying it on other diseases was simply experimenting without reason therefor. He was decidedly opposed to even suggesting its use in mental diseases without symptoms of myxœdema.

The PRESIDENT dissented from this view, namely, that thyroid extract should administered only in myxœdema, and said he thought it was proper to employ the thyroid extract empirically, as we were not yet thoroughly familiar with the function of the gland.

Dr. F. X. DERCUM, in answer to a query by the President, stated that he had successfully treated one case of myxœdema by the administration of the thyroid gland. The mental symptoms in this case had, however, not entirely disappeared.

Dr. E. D. FISHER said that one would suppose from the cases reported that the results of this treatment were absolute cures; but such was not the case, as he had found that the mental functions remained more or less impaired. There was more marked improvement in the physical condition. The use of thyroid extract in appropriate cases had proved of the greatest benefit, but he deprecated its employment when specific indications did

not call for it, as it tended to lower its position as a therapeutic agent.

Dr. LANDON CARTER GRAY, of New York City, said that the effect of these extracts were transitory, and that some of the cases of myxœdema had already relapsed. This treatment would probably share the fate of treatment with other extracts. He had used brain and spinal cord extracts and with marvellous results. In one case of syphilis of the spinal cord with symptoms of pseudo-ataxia and subacute mania, the patient made a fair recovery under the use of mercury and iodide of potassium. After the subsidence of the subacute mania, he had great tremor of the hands, etc., and slowly passed into a condition of dementia, so that he did not recognize anyone. Thinking the case was then a favorable one for the trial of the brain extract, this treatment was instituted and with incredible results. In the course of three weeks he was as well as he had been six months before, and his attendant thought he would recover; but the day the speaker came to see him, he had a fit and died. There was a syphiloma in the brain, and marked evidences of intracranial syphilis, membranes, parenchyma, and arteries being implicated.

In another case, one of syphilitic paraplegia, one of complete absence of sensation and motion in the lower limbs, mercury and iodide of potassium were used, but he had more regard for himself, and took twelve hundred and fifty grains of the iodide of potassium for ten days. The only complaint was that he slept seventeen hours out of the twenty-four. The dose was then reduced to six hundred grains, which he took well. With all this medication there had been no improvement for about eight months, so he was put on the spinal cord extract, and at the end of six weeks he was able to move his legs.

Dr. LEONARD WEBER, of New York City, asserted that there was not a single case of absolute cure on record. In one case which had come under his observation, the result had been exceedingly good. Relapse was apt to recur unless the remedy was continued. Greater and more permanent relief, he thought, could be obtained by surgical means.

Dr. G. L. WALTON, of Boston, mentioned a case which improved so rapidly under five grains once a day that in one week she was hardly recognizable, on account of the change in expression.

Dr. J. ARTHUR BOOTH read a paper on

A REVIEW OF THE THYROID THEORY IN
GRAVES' DISEASE.—REPORT OF TWO CASES
TREATED BY THYROIDECTOMY.(See page 486)

DISCUSSION.

Dr. J. J. PUTNAM, of Boston, expressed his interest in the reader's paper and cases, and said that though his own experience had not been very favorable to the operation, yet the published reports and those given by Dr. Booth, indicated that it was often of great value. He thought the dangers of the first few days after operation had not been made enough of.

Sometimes everything goes well, but great prostration and sudden death is occasionally seen. One of his two patients had died; and the other was for some days at the point of death, with complete collapse and pulse of 200.

A third patient, operated on some years ago by a Swedish surgeon, had recently consulted him for a relapse of symptoms with return of the goitre, and she also reported that during the first few days after operation she had been very ill.

Dr. Putnam doubted the tenability of the "thyreoidal theory" of Graves' disease. He called attention to the case recently reported by Richard Owen, where a man with typical Graves' disease had been given, from misunderstanding, a quarter of a pound of sheep's thyreoid, instead of a quarter of a gland; yet the disease was not markedly accentuated. He himself was treating a severe case of Graves' disease with thyroids, and the patient, though she has grown very thin, has been in some respects better during part of the time at least.

Dr. J. MADISON TAYLOR, of Philadelphia, remarked that it was of value to record briefly an experience in the use of thyreoid extract. He had used it very faithfully in certain cases of exophthalmic goitre long under his observation, and had not found it of definite value over and above other simpler measures, and in meeting obvious indications. In that connection, he related the case of a child of two years, described most carefully by a student at the Polyclinic, in whom undoubtedly true exophthalmic goitre was present. This he will report in full later.

Dr. W. J. MORTON, of New York City, recalled four recent cases which had been absolutely cured by the use of electricity for a period of from two to three months. He preferred this method of treatment.

Dr. F. X. DERCUM said that it was very difficult to understand, or to formulate a theory to explain the favorable results after operation. It was difficult to reconcile the results with the cases of Graves' disease every now and then met with, in which the thyroid gland is already excessively atrophied instead of being enlarged.

Dr. WILLIAM A. HAMMOND, of Washington, D. C., asked if Dr. Morton had used any other remedy in conjunction with the electricity. He had seen satisfactory results from using electricity together with digitalis and hyoscyamin, and diminishing the amount of fluid ingested to as little as a quarter of a pint a day.

Dr. MORTON replied that he had used electricity only.

The PRESIDENT thought many cases were curable. He instanced the case of a young woman who had developed the disease after a sudden fright. A prolonged period of rest in bed was prescribed for her. She subsequently married, gave birth to a child, and completely recovered from her symptoms of Graves' disease.

Dr. J. A. BOOTH said that the alleged danger of the operation was not borne out by statistics. None of the recorded cases show any excessive hæmorrhage to have occurred from cutting through the gland itself. In his case, the patient did well. Galvanism had been used faithfully for seven months and without result.

EXPERIMENTAL INVESTIGATION ON THE PHYSICAL AND CHEMICAL ACTION OF THE GALVANIC CURRENT ON THE LIVING ORGANISM.

By Dr. G. W. JACOBY and Dr. F. SCHWYZER, of New York.

ABSTRACT.

A critical analysis of the facts thus far gained through the study of the action of the galvanic current upon the living organism, shows not only that many problems still

await solution, but that from a practical point of view nothing has been learned which would in any way explain the therapeutic successes so generally attributed to the use of galvanism. The direction in which investigations have thus far been conducted is an erroneous one, and the manner of carrying them out, faulty; no successful issue will be reached until the purpose of our experiments be directed to discover the changes which are produced by the action of electricity in the living cell. What changes the galvanic current may produce in the single cells of the body, may be discovered by directing our attention to the physical state of these cells and to their chemical constitution after they have been subjected to the influence of the current. The study of the phenomenon of electrotropismus should also cast some light upon the subject.

The present investigations were devoted solely to a study of these chemical and physical effects. Investigations as to the influence which the galvanic current may exert in producing nuclear changes have as yet to a great extent remained fruitless; so also the microscopical specimens of muscles obtained from living frogs through which a strong current had previously been passed, have revealed very little. The blood itself, having been prepared according to Ehrlich's well known methods, however, showed distinct deviations from the normal; the specimens from the positive leg were made up of red corpuscles remarkably increased in size, but of unchanged contours, while the red corpuscles in the specimens from the negative leg, were decreased in size, and their contours were indistinct and dentated. In man, precisely similar results were attained, and were, if anything, more pronounced than in the frog. These changes may be explained to a certain extent by the laws of cataphoresis, the variations from Porret's phenomenon probably being due to the differences in the osmotic condition of the parts through which the current flows. The experiments which were made with a view of determining any electrolytic action of the current upon the interior of the body, were of a much more complicated nature, and only after many ill successes were positive results obtained. These results were finally brought about in the following manner, rabbits and guinea pigs being used. Two robust animals, narcotized, were placed back to back, a portion of skin over the spine of each animal having been previously removed; thus electrically speaking, one

animal possessing two distinct circulatory systems, was obtained. The electrodes were then placed upon the thorax of each animal and a current of fifty m. a. passed for about fifteen minutes. Hereupon the thorax of each animal was opened as quickly as possible, the apex of the heart cut off and thus nearly the entire amount of blood which flowed from each circulatory system was obtained. This blood was examined by a modification of Krauss' method, which the authors were obliged to make use of, and which they highly recommend. As a result of many such experiments it was found that the blood taken from the animal subjected to the influence of the negative pole contained 0.36% Na OH, while the blood from the positive animal contained over 20% less than this amount.

From their experiments the authors conclude that inasmuch as the red blood corpuscles are influenced by the cataphoric action of the galvanic current, there is no reason why the same should not take place in the leucocytes and other plasma cells which are rich in fluid, as for instance, the smooth and striated muscular fibres. Whether and to what extent the physiology of the cell is altered by these cataphoric changes, cannot as yet be determined.

On the other hand, to the changes produced in the alkalinity of the tissues they attach very great importance, and drawing deductions from another series of experiments upon *Spermatozoa*, they believe that while the tissues in a condition of rest possess a medium degree of alkalinity, a slight increase of this in the neighborhood of the cathode will produce a very marked functional activity, while on account of the decreased alkalinity, we will have reduced functional activity in the neighborhood of the anode. To what extent the circulation is able to equalize these disordered conditions of alkalinity, and whether any therapeutic deductions are permissible from these experiments, are questions which the authors as yet prefer to leave unanswered.

DISCUSSION.

Dr. W. J. MORTON, of New York City, said that the results attributed to the cataphoric effect seemed to be subversive of what had been usually taught, for it had thus far been accepted that the tissue at the negative pole had its fluidity increased, while the tissue of the positive

pole was decreased. As to the action of the galvanic current in producing acidity of tissue at the positive pole region, and alkalinity at the negative pole, he welcomed the experimental evidence furnished by Dr. Jacoby. It was certainly true that this effect entered widely into the intra-polar region, and thus influenced the irritability of tissue, as in anelectrotonus and katelectrotonus.

This physical explanation of physiological states had first been made by von Humbolt, who attributed the increased response to the excitation of the negative pole to the increased alkalinity produced in an already alkaline tissue by that pole, and the decreased response to the positive pole to the fact that that pole produced an acid reaction. The speaker would go further than this, and had already suggested as an explanation of the increased response to the positive pole in the reaction of the degeneration of Erb, that the muscle degenerating had an acid reaction and, therefore, responded most vigorously to the acid, viz, the positive pole. As to alkalizing the blood electrically, we might, perhaps, do this better by alkalies administered by the mouth, but we could not by drugs do what Dr. Jacoby had done and render a tissue less alkaline or more acid. Therefore, the local action of electricity in this respect could not be otherwise affected.

Dr. JACOBY said he wished the Society to look upon this as a preliminary communication, for other experiments were in progress which would certainly be productive of positive results.

Analgesia of the Ulnares as a Symptom of Tabes, by E. Biernacki (*Neurol. Cent. blatt.*, No. 7, 1894, pp. 242-246).

B. has discovered that analgesia of the ulnares occurs frequently in tabes dorsalis, having observed it in fourteen out of 20 typical cases. In the fifteenth case, only the left ulnaris was analgesic, whilst the right showed normal sensibility. In the remaining cases, the analgesia was not absolute, the patients experiencing pain on a repeated pressure.

P. M.